Notice of Allowability	Application No.	Applicant(s)	
	10/027,343	LOOPER ET AL.	
	Examiner	Art Unit	
	Peter J. Vrettakos	3739	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *Amendment dated 6-16-06*.

2. ☒ The allowed claim(s) is/are *43-44,48,50,52,53,56-58,78-80 and 84*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Don Nickey on 7-17-06.

The application has been amended as follows:

1) Claim 43 reads: A reconfigurable surgical apparatus, comprising:
a surgical instrument assembly formed with a hollow manipulation shaft internally receiving a prime mover activated by an actuator located at a proximal end of the shaft;
a coupler formed about a distal end of the shaft and having a capture ledge;
an interchangeable surgical tool attachable to the coupler and including an anchor adapted to cooperate with and mate to the capture ledge, such that a rotational force applied to the prime mover is transmitted between the prime mover and the tool;
wherein said **anchor is formed with at least one generally hook shaped tine,** formed with a frangible portion, that includes an engagement face adapted to cooperate with and non-releasably engage the capture ledge; and
wherein said anchor **is formed with the frangible portion designed to break in an orientation substantially orthogonal to a direction of translation of the prime mover.**

2) Claims 45-47 and 49 are deleted.

3) Claim 48 now depends from claim 43.

4) Claim 50 reads: A reconfigurable surgical apparatus, comprising:
a surgical instrument assembly formed with a hollow manipulation shaft internally receiving a prime mover activated by an actuator located at a proximal end of the shaft;
a coupler formed about a distal end of the shaft having a capture ledge that defines a recess in the coupler;

an interchangeable surgical tool adapted to cooperate with and connect to the coupler comprising a frangible portion and an anchor adapted to cooperate with and non-releasably mate to the capture ledge thereby transferring a rotational force applied to the prime mover from the prime mover to the tool, **the frangible portion being adapted for receipt in the recess after the anchor has been removed from the tool**; and

wherein said anchor **is formed with the frangible portion designed to break in an orientation substantially orthogonal to a direction of translation of the prime mover.**

5) Claim 51 is deleted.

6) Claim 52 reads: A reconfigurable surgical apparatus, comprising:

a surgical instrument assembly formed with a hollow manipulation shaft internally receiving a prime mover activated by an actuator located at a proximal end of the shaft;

a coupler formed about a distal end of the shaft and incorporating an anchor;

an interchangeable surgical tool adapted to cooperate with and connect to the coupler and formed with a capture ledge adapted to cooperate with and mate to the anchor thereby transferring a rotational force applied to the prime mover from the prime mover to the tool;

wherein said **anchor is formed with at least one generally hook shaped tine**, formed with a frangible portion, that includes an engagement face adapted to cooperate with and non-releasably engage the capture ledge; and

wherein said anchor **is designed to break in an orientation substantially orthogonal to a direction of translation of the prime mover.**

7) Claims 54 and 55 are deleted.

8) Claim 56 reads: A reconfigurable surgical apparatus, comprising:

a surgical instrument assembly formed with a hollow manipulation shaft internally receiving a prime mover activated by an actuator located at a proximal end of the shaft;

a coupler formed about a distal end of the shaft to have a generally hook shaped anchor having an engagement face;

an interchangeable surgical tool formed at an end with a capture ledge that defines a lateral recess in the tool, the ledge being adapted to cooperate with and mate to the engagement face thereby transferring a rotational force applied to the prime mover from the prime mover to the tool;

wherein said anchor is formed with **a frangible portion, that includes an engagement face adapted to cooperate with and non-releasably engage the capture ledge**; and

wherein said anchor **is designed to break in an orientation substantially orthogonal to a direction of translation of the prime mover.**

9) Claim 57 reads: A reconfigurable surgical apparatus, comprising:

a surgical instrument assembly formed with a hollow manipulation shaft internally receiving a prime mover activated by an actuator located at a proximal end of the shaft;

a coupler formed about a distal end of the shaft and formed with an anchor;

an interchangeable surgical tool configured to connect to the coupler and formed with a reciprocating capture member adapted to cooperate with and non-releasably mate to the anchor thereby transferring a rotational force applied to the prime mover from the prime mover to the tool;

wherein said anchor is formed with **at least one generally hook shaped tine,** formed with a frangible portion; and

wherein said anchor **is formed with the frangible portion designed to break in an orientation substantially orthogonal a direction of translation of the prime mover.**

10) Claims 59 through 77 are deleted.

11) Claim 78 reads: A means for performing an intracorporeal surgical procedure, comprising:

a means for imparting a range of motion;

a means for defining an intracorporeal passageway connected at a proximal end to the motion imparting means, the passageway being internally received with a means for transmitting the imparted range of motion;

a means for distally coupling the passageway means that defines a means for anchoring;

an interchangeable means for performing a surgical intervention that includes a means for capturing the anchoring means;

wherein the interchangeable intervention means is, when mated to the anchoring means, remotely actuatable by operation of the motion imparting means and thereby transmits a rotational force applied to the motion imparting means between the motion imparting means and the interchangeable intervention means;

wherein said anchoring means is formed with **at least one generally hook shaped tine** that includes an engagement face adapted to cooperate with and non-releasably engage the means for capturing; and

wherein the means for anchoring is further formed with a **means for defining a frangible portion of the anchoring means designed to break in an orientation substantially orthogonal to a direction of translation of the motion imparting means.**

12) Claims 81, 82 and 83 are deleted.

The following is an examiner's statement of reasons for allowance: claims 43-45, 48-50, 52-53, 56-58, 78-80 and 84 are now pending (after the Examiner's Amendment). Claims 43, 50, 52, 56, 57 and 78 are independent. Each of the independent claims are listed above. Bolded claim language found in the context of each claim indicates allowable subject matter. Each independent includes at least two of the following phrases: at least one hook shaped tine, a frangible portion designed to break in an orientation substantially orthogonal a direction of translation of the prime mover, and a frangible portion being adapted for receipt in a recess after the device anchor has been removed from the tool.

An update search performed 7-15-06 unearthed several related patents (see Notice of References Cited). The closest prior art is Sackier et al. (5,496,333) especially figures 1,5 and 6 depicting a hook shaped tine in a device analogous to the Applicant's. What is missing and not suggested by Sackier et al. is a frangible portion designed to break in an orientation substantially orthogonal a direction of translation of the prime mover as claimed by the instant Applicant. Designing a frangible portion would destroy the intended purpose of Sackier et al., which involves *maintaining* a rotatable connection between elements 10 and 23 in figure 5. The Applicant, on the other hand wants the analogous connections in their device to be frangible for reasons asserted in the published (2003/0114839) specification paragraph 14: "In certain implementations, it may be desired to limit use of the end tool and/or the entire reconfigurable surgical

apparatus to a single use. This would ensure the sterility of the apparatus and/or the end tool prior to use." The Applicant has specifically designed their device to be frangible in order to achieve this stated desire. This is shown in figure 3 elements 200 and 210. To this end, all pending claims are in condition for allowance.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter J. Vrettakos whose telephone number is 571-272-4775. The examiner can normally be reached on M-F 9-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Linda C. Dvorak can be reached on 571-272-4764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Pete Vrettakos
July 19, 2006

ROY D. GIBSON
PRIMARY EXAMINER